

RESPONSE

U.S. Appln. No. 09/890,206

Ryntveit teach the dimension of the obstacles, perpendicularly to the axis ranges between 0.25 and 0.75 times the diameter of the tube where the obstacles take up at least 80% of the lateral section of the tube (figure 2, item 5).

Applicant, however, has been unable to identify any disclosure or suggestion within EP '999 of obstacles taking up **at least 80% of the lateral section of the tube**. EP '999's written description is silent about the fraction of lateral section occupied by the bristles.

The Examiner refers to a graphical disclosure within EP '999, *i.e.*, item 5 of figure 2.

Figure 2, however, simply shows a device with four obstacles (brushes (5)) each having six bristles inserted in a twisted wire. The brushes (5) define a circular central zone having a diameter of about 0.73 of the diameter of the cross-section of the tube (1.6 cm/2.2 cm).

Even if one were to assume that the bristles are placed so densely that, when viewed from the top of the tube, they occupy 100% of the central circular zone of the cross-section of the tube, there is still an annular zone of about 3 mm left between the brushes (5) and the wall (1) of the cylindrical tube. A simple calculation shows that the ratio of the surface of the central circular zone to the total cross-section of the tube is about 53% ($0.73^2/1^2 = 0.53$). Thus, the obstacles (bristles (5)) in figure 2 take up **at most 53%** of the total cross-section of the cylindrical tube.

Furthermore, the assumption above that the bristles occupy **100%** of the central circular zone is largely overestimated. Figure 2 of EP '999 shows a device with only six bristles for each of the four brushes. These bristles clearly do not occupy 100% of the central circular zone of the cross-section of the tube, as assumed in the above paragraph.

Therefore, the above-calculated 53% value is largely overestimated, and the combination of US '751 and EP '999 fails to disclose or even suggest a device with obstacles "taking up at least 80% of the lateral section of the tube."

Second, there is no motivation to combine US '751 and EP '999 and there is no reasonable expectation of success in combining US '751 and EP '999 to arrive at the inventions of Claims 4 and 6-9.

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To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify one reference based on the teachings of the other in the manner proposed by the Examiner. There must also be some reasonable expectation of success. MPEP § 2143 and In re Vaeck, 20 USPQ2d 1438 (Fed. Cir. 1991).

The obstacles disclosed in US '975 are completely different from the obstacles disclosed in EP '999. They are completely different based on their shape, they are completely different based on their orientation, and they are completely different based on the type of material.

With respect to their shape, EP '999 discloses bristles, *i.e.*, elongated, fine obstacles. US '751, on the other hand, discloses relatively large, flat blades.

With respect to their orientation, EP '999 discloses "substantially transverse springs." Column 3, line 31 of EP '999. US '751, on the other hand, discloses blades having a "normal inclination of 30 to 45 °, preferably 45 ° to the axis of the line. Column 2, line 38 of US '751.

With respect to the type of material, US '751 discloses *resilient* material. Column 2, line 31. EP '999, on the other hand, discloses *flexible* obstacles.

One of ordinary skill in the art therefore had no reason to combine the teaching relative to one type of obstacle (flexible, substantially transverse bristles) with the teaching of a reference disclosing a completely different type of obstacle (resilient Teflon blades having an inclination of about 30-45 °. Nor could one of ordinary skill in the art reasonably expect success with such a combination. There is no evidence in either EP '999 or US '751 that would lead one of ordinary skill in the art to reasonably expect success in modifying the disclosure of US '751 by reference to EP '999.

Third, the Examiner asserts at page 4 of the Action that the obstacles disclosed in US '751 (emphasis added):

are symmetric in relation to the axis of the tube (Figure 1, item 4);
and **have rotational symmetry** and that **symmetry is offset in relation to cable** (compare symmetry of Figure 1, top two items

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listed as item 2) where the obstacles have **cylindrical shape** (Figure 1, item 2).

Applicant respectfully disagrees.

Figure 1 does not disclose obstacles with cylindrical shape. The description of Figure 1 at column 2, lines 20-40, clearly specifies that "the blades are mounted on the line in adjacent pairs having an angle of 60 to 90 to each other." Figure 1 shows two such adjacent pairs of blades. The upper pair of blades simply has a rotational orientation different from the one of the lower pair of blades. Rotating the blades around the central axis (1), however, does not make them cylindrical.

The Examiner's argument above appears to be based on a visual misinterpretation of the drawing of the uppermost blades shown in Figure 1 of US '751. Figure 1 of US '751, however, must be interpreted consistent with the *written description* at column 2, lines 20-40, which does not mention cylindrical obstacles. The three lower blades of Figure 1 clearly have a flat shape **without rotational symmetry**. Because the obstacles of US '751 have no rotational symmetry, their symmetry cannot be offset in relation to the cable, as claimed in present Claim 8.

For the foregoing reasons, Applicant respectfully requests that the Examiner reconsider and withdraw the §103(a) rejection.

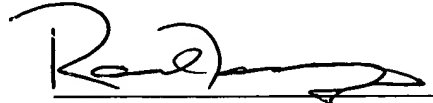
Reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, he is kindly requested to contact the undersigned at the telephone number listed below.

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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "L. Raul Tamayo", written over a horizontal line.

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